



## **Air Quality Permitting Technical Memorandum**

**TIER II Operating Permit and Permit to Construct No. 017-00036**

**CEDA-PINE VENEER INC.  
SAMUELS, IDAHO**

**Prepared By:**

**Kent Berry  
Environmental Quality Management, Inc.**

**PROJECT No. T2-010111**

**July 23, 2002**

**FINAL PERMIT**

## ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency
EQ	Environmental Quality Management, Inc.
HAPS	hazardous air pollutants
IDAPA	A numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pounds per hour
MACT	Maximum Available Control Technology
MMBF/yr	million board feet per year
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standards
PM	particulate matter
PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
SIP	State Implementation Plan
SM	synthetic minor
SO <sub>2</sub>	sulfur dioxide
T/yr	tons per year
VOC	volatile organic compound

## **PURPOSE**

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01 Sections 404.04, *Rules for the Control of Air Pollution in Idaho*, for Tier II operating permits.

## **PROJECT DESCRIPTION**

Ceda-Pine Veneer Inc. (Ceda-Pine), located in Samuels, Idaho, has requested renewal of their Tier II operating permit originally issued August 5, 1996, and amended October 9, 1998. The source testing requirements for the hog boiler have been updated, emission calculations for combustion sources have been updated to reflect newly published emission factors, and the permit has been standardized according to the Department's current permitting format. There have been no physical changes at the facility which would affect facility emissions. The emissions sources at the facility are as follows:

**Table 1.1 FACILITY EMISSION SOURCES**

<b>Permit Section</b>	<b>Source Description</b>	<b>Emissions Controls</b>
3	Hog-fuel boiler Hurst H4-4040-300 Rated at 20,000 lb/hr steam	Multiclone Hurst HBC 600/300-MC
3	Standby oil-fired boiler York Shipley Rated at 10,000 lb/hr steam	None
4	P1 Deck saw	None
4	P2 Ring debarker	None
4	P3 Chop saw	None
4	P4 Rosser head debarker	None
4	P5 Chop saw	None
4	P7 Chipper No. 1	None
4	P8 Chipper No. 2	None
4	P9 Screen out	None
4	P10 Fines blower cyclone	None
4	P11 Falcon hog	None
4	P12 & P13 Steam chamber No. 1 & 2	None
4	P15 Steam dryer	None
4	P17 Knife hog	None
4	P18 Globe saw cyclone	None
4	ST1, ST7 Bins - Bins for chips	None
4	Sawmill, slicer, and clip/grade	Indoors
4	Storage piles	None
4	Paved and unpaved roads	None

## **FACILITY DESCRIPTION**

The description of this facility and the equipment regulated in the permit have not changed since the original issuance of the original Tier II operating permit in 1996. For facility and equipment descriptions, refer to the technical memorandum dated August 5, 1996, written by Yihong Chen, DEQ Air Quality Engineer.

## **SUMMARY OF EVENTS**

August 13, 2001	DEQ received a request from Ceda-Pine for renewal of their Tier II operating permit, which expired on August 5, 2001. No changes were requested.
March 1, 2002	DEQ deemed the application complete.
April 11, 2002	DEQ issued a facility draft Tier II permit.
April 29, 2002	DEQ received facility comments on the draft permit.
May 30, 2002	DEQ issued a proposed Tier II permit for public comment.
July 8, 2002	The public comment period closed. Two comments were received and responses have been prepared.

## **PERMIT HISTORY**

The following is a summary of the permit files available to EQ:

1989	PTC No. 0249-0036 was issued for the hog-fuel boiler.
August 5, 1996	A Tier II operating permit was issued that revised the NO <sub>x</sub> emission limit for the hog-fuel boiler and addressed the other sources at the plant.
October 9, 1998	A revised Tier II permit was issued that increased the permitted log throughput from 12.6 MMBF/yr to 25 MMBF/yr.

## **DISCUSSION**

### **1. Emissions Estimates**

The emission calculations for the processing and material-handling operations have not changed since the revision of the Tier II permit on October 9, 1998. For emission estimate information for this facility, refer to the technical memorandum dated October 9, 1998, written by Yihong Chen, DEQ Air Quality Engineer. Recalculated emissions for the hog-fuel boiler, standby boiler, and steam chamber using the latest EPA and DEQ emission factors are presented in Appendix A.

### **2. Modeling**

The SCREEN3 model was run for the recalculated emissions from the hog-fuel boiler. The estimated concentrations and the SCREEN3 output file are presented in Appendix B.

### **3. Area Classification**

Ceda-Pine is located in Samuels, which is in Bonner county and Air Quality Control Region 63. Bonner County is classified as attainment or unclassifiable for all state and federal criteria air pollutants, except the Sandpoint area, which is nonattainment for PM<sub>10</sub>.

4. Facility Classification

The facility is not a major facility as defined in IDAPA 58.01.01.006.55 or 008.10. It is not a designated facility as defined in IDAPA 58.01.01.006.27. The facility is classified as a SM source because actual and potential emissions of regulated air pollutants are less than 100 T/yr only if it complies with the federally-enforceable emission limits in the permit.

5. Regulatory Review

This operating permit is subject to the following permitting requirements:

- |                                    |  |
|------------------------------------|--|
| a. <u>IDAPA 58.01.01.401</u>       | Tier II Operating Permit                       |
| b. <u>IDAPA 58.01.01.403</u>       | Permit Requirements for Tier II Sources        |
| c. <u>IDAPA 58.01.01.404.01(c)</u> | Opportunity for Public Comment                 |
| d. <u>IDAPA 58.01.01.404.04</u>    | Authority to Revise or Renew Operating Permits |
| e. <u>IDAPA 58.01.01.406</u>       | Obligation to Comply                           |
| f. <u>IDAPA 58.01.01.470</u>       | Permit Application Fees for Tier II Permits    |
| g. <u>IDAPA 58.01.01.625</u>       | Visible Emission Limitation                    |
| h. <u>IDAPA 58.01.01.650</u>       | General Rules for the Control of Fugitive Dust |

6. Permit Conditions

The wood usage rates for the hog boiler have been replaced with steam production limits to be consistent in regulated wood fired boilers. Emission calculations have been updated for the combustion sources based on newly published emission factors. The format and general provisions have been changed to be consistent with DEQ's latest Tier II permit template.

Particulate matter source testing was conducted on December 15, 1998 on the hog-fuel boiler. The average grain loading measured during the three runs was 0.065 gr/dscf. This measurement is 81% of the standard which is 0.08 gr/dscf for solid fuel combustion sources. The next source test for PM will be required to occur within the next three years from the issuance date of this renewed Tier II permit.

7. AIRS

**AIRS/AFS FACILITY-WIDE CLASSIFICATION<sup>a</sup> DATA ENTRY FORM**

AIR PROGRAM	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	TITLE V	AREA CLASSIFICATION A – Attainment U – Unclassifiable N – Nonattainment
POLLUTANT							
SO <sub>2</sub>	B						A
NO <sub>x</sub>	B						U
CO	B						U
PM <sub>10</sub>	SM					SM	U
PM (Particulate)	SM						A
VOC	B						U
THAP (Total HAPs)	NA						NA
			APPLICABLE SUBPART				

<sup>a</sup> AIRS/AFS Classification Codes:

- A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For NESHAP only, class "A" is applied to each pollutant which is below the 10 T/yr threshold, but which contributes to a plant total in excess of 25 T/yr of all NESHAP pollutants.
- SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.
- B = Actual and potential emissions below all applicable major source thresholds.
- C = Class is unknown.
- ND = Major source thresholds are not defined (e.g., radionuclides).

**FEES**

Fees apply to this facility in accordance with IDAPA 58.01.01.470. The facility is subject to permit application fees for this renewed Tier II operating permit of \$500, which were paid at the time of application.

**RECOMMENDATIONS**

Based on the review of the application materials, and all applicable state and federal regulations, staff recommends DEQ issue a Tier II operating permit to Ceda-Pine Veneer. A public comment period on the air quality aspects of the proposed permit was provided in accordance with IDAPA 58.01.01.404.01.c.

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cc: Kent Berry, EQM  
Tom Harman, Coeur d'Alene Regional Office  
Joan Lechtenberg, Air Quality Division

## **APPENDIX A**

### **EMISSIONS ESTIMATES FOR HOG-FUEL BOILER, STANDBY BOILER AND STEAM CHAMBERS**

## **APPENDIX B**

### **HOG-FUEL BOILER MODELING RESULTS AND SCREEN3 OUTPUT FILE**



# Ceda-Pine

04/30/02

16:09:42

\*\*\* SCREEN3 MODEL RUN \*\*\*  
 \*\*\* VERSION DATED 96043 \*\*\*

Ceda-Pine Veneer

## SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	0.126000
STACK HEIGHT (M)	=	12.1920
STK INSIDE DIAM (M)	=	0.6401
STK EXIT VELOCITY (M/S)	=	22.3888
STK GAS EXIT TEMP (K)	=	435.9278
AMBIENT AIR TEMP (K)	=	293.1500
RECEPTOR HEIGHT (M)	=	0.0000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	0.0000
MIN HORIZ BLDG DIM (M)	=	0.0000
MAX HORIZ BLDG DIM (M)	=	0.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.  
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 7.366 M\*\*4/S\*\*3; MOM. FLUX = 34.528 M\*\*4/S\*\*2.

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\*\*\*  
 \*\*\* SCREEN AUTOMATED DISTANCES \*\*\*  
 \*\*\*\*\*

\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*\*

DIST	CONC		U10M	USTK	MIX HT	PLUME	SIGMA
(M)	(UG/M**3)	STAB	(M/S)	(M/S)	(M)	HT (M)	Y (M)
Z (M)	DWASH						
1.	0.000	1	1.0	1.0	320.0	106.66	2.57
2.55	NO						

## Ceda-Pine

2500.	1.922	5	1.0	1.1	10000.0	68.71	118.25
41.33	NO						
2600.	1.918	5	1.0	1.1	10000.0	68.71	122.44
42.12	NO						
2700.	1.911	5	1.0	1.1	10000.0	68.71	126.62
42.91	NO						
2800.	1.901	5	1.0	1.1	10000.0	68.71	130.78
43.68	NO						
2900.	1.915	6	1.0	1.1	10000.0	58.48	90.12
29.60	NO						
3000.	1.939	6	1.0	1.1	10000.0	58.48	92.87
30.04	NO						
3500.	1.967	6	1.0	1.1	10000.0	58.48	106.48
31.85	NO						
4000.	1.958	6	1.0	1.1	10000.0	58.48	119.90
33.55	NO						
4500.	1.926	6	1.0	1.1	10000.0	58.48	133.16
35.15	NO						
5000.	1.881	6	1.0	1.1	10000.0	58.48	146.27
36.67	NO						
5500.	1.827	6	1.0	1.1	10000.0	58.48	159.24
38.12	NO						
6000.	1.769	6	1.0	1.1	10000.0	58.48	172.09
39.51	NO						
6500.	1.710	6	1.0	1.1	10000.0	58.48	184.82
40.84	NO						
7000.	1.650	6	1.0	1.1	10000.0	58.48	197.44
42.13	NO						
7500.	1.587	6	1.0	1.1	10000.0	58.48	209.95
43.24	NO						
8000.	1.528	6	1.0	1.1	10000.0	58.48	222.38
44.30	NO						
8500.	1.471	6	1.0	1.1	10000.0	58.48	234.71
45.33	NO						
9000.	1.417	6	1.0	1.1	10000.0	58.48	246.96
46.33	NO						
9500.	1.366	6	1.0	1.1	10000.0	58.48	259.13
47.29	NO						
10000.	1.318	6	1.0	1.1	10000.0	58.48	271.23
48.23	NO						
15000.	0.9586	6	1.0	1.1	10000.0	58.48	388.65
56.45	NO						
20000.	0.7423	6	1.0	1.1	10000.0	58.48	501.12
61.73	NO						
25000.	0.6030	6	1.0	1.1	10000.0	58.48	609.89
66.19	NO						
30000.	0.5062	6	1.0	1.1	10000.0	58.48	715.71
70.09	NO						

Pollutant	Emission Factor (lb/1000gal)	Potential Emissions (ton/yr)
PM <sub>10</sub> *	3.3	1.28
SO <sub>2</sub>	71	27.60
CO	20	7.78
NO <sub>x</sub>	5	1.94
VOC	0.2	0.08

\* Includes condensibles

#### Annual Potential Emission from Steam Chambers (ton/yr)

Throughput 25.0E+6 BF/yr

Pollutant	Emission Factor (lb/1000 BF)	Potential Emissions (ton/yr)
PM <sub>10</sub>	0.159	1.99
VOC	1.5	18.75